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**Term:**

Fr-Mulv or Friend murine Leukemia virus

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**Search History**

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*DB=USPT,PGPB,JPAB,EPAB,DWPI; PLUR=YES; OP=ADJ*

L2 Fr-Mulv or Friend murine Leukemia virus

142 L2

*DB=USPT; PLUR=YES; OP=ADJ*

L1 Fr-Mulv or Friend murine Leukemia virus

95 L1

END OF SEARCH HISTORY

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L2: Entry 37 of 142

File: PGPB

Aug 8, 2002

PGPUB-DOCUMENT-NUMBER: 20020106790  
PGPUB-FILING-TYPE: new  
DOCUMENT-IDENTIFIER: US 20020106790 A1

TITLE: Retroviral vector for the transfer and expression of genes for therapeutic purposes in eukaryotic cells

PUBLICATION-DATE: August 8, 2002

US-CL-CURRENT: 435/320.1; 435/235.1, 435/456

APPL-NO: 09/ 970597 [PALM]  
DATE FILED: October 4, 2001

## RELATED-US-APPL-DATA:

Application 09/970597 is a continuation-of US application 09/433322, filed November 3, 1999, PATENTED

Application 09/433322 is a continuation-of US application 08/270662, filed June 30, 1994, ABANDONED

## FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	DOC-ID	APPL-DATE
FR	93 08015	1993FR-93 08015	June 30, 1993

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L2: Entry 45 of 142

File: USPT

Aug 26, 2003

DOCUMENT-IDENTIFIER: US 6610522 B1

TITLE: Cloned genes encoding reverse transcriptase lacking RNase H activity

Other Reference Publication (129):

Moelling, K., "Characterization of Reverse Transcriptase and RNase H from Friend-Murine Leukemia Virus," Virology 62:46-59 (1974).

Other Reference Publication (130):

Moelling, K., "Further Characterization of the Friend Murine Leukemia Virus Reverse Transcriptase-RNase H Complex," J. Virol. 18:418-425 (1976).

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L2: Entry 57 of 142

File: USPT

Jun 11, 2002

DOCUMENT-IDENTIFIER: US 6403300 B1

TITLE: Monoclonal antibodies for detection of friend murine leukemia virusAbstract Text (1):

The present invention relates to Friend murine leukemia virus (F-MuLV) specific monoclonal antibodies, or binding fragments thereof, specific for an antigenic determinant of a gp85 envelope precursor protein characteristic of a methanol-fixed F-MuLV infected cell. The invention also relates to hybridomas resulting from the fusion of myeloma cells and spleen cells, which hybridomas produce a Friend murine leukemia virus (F-MuLV) specific monoclonal antibody specific for an antigenic determinant of a gp85 envelope precursor protein characteristic of a methanol-fixed F-MuLV infected cell. The invention further relates to kits containing the above-described monoclonal antibodies.

Brief Summary Text (3):

The present invention relates, in general, to monoclonal antibodies. In particular, the present invention relates to monoclonal antibodies that recognize Friend murine leukemia virus.

Brief Summary Text (5):

Several monoclonal antibodies which react with the Friend murine leukemia virus (F-MuLV) and related retroviruses have been produced (CHESEBRO, B. et al. (1983a) Virology 127, 134-148). These antibodies have been used to titrate and distinguish a mixture of ecotropic F-MuLV and dual-tropic Friend mink cell focus-inducing (MCF) viruses in a focal infectivity assay (FIA) using indirect membrane immunofluorescence to detect foci of infected live cells (SITBON, M. et al. (1985) Virology 141, 110-118). However, with immunofluorescence microscopy it has often been difficult to find low power (10.times.) objectives with sufficient light gathering capacity to facilitate visualization of foci. Higher magnifications can be used, but this greatly increases the labor of scanning culture wells to count foci of viral infection. These problems can be overcome by using immunoperoxidase, rather than immunofluorescence in the detection of foci, but in this situation it is desirable to carry out tests on methanol-fixed cells both to eliminate endogenous peroxidase and to allow detection of antigens in the cytoplasm of infected cells. Furthermore, the use of fixed cells aids greatly in the convenience of performing assays since multiple assays can be prepared and stored for processing at a later time. However, monoclonal antibodies generated against protein antigens in their native state frequently will not recognize the viral antigens after fixation.

Brief Summary Text (9):

It is another object of the invention to provide monoclonal antibodies that recognize epitopes of a Friend murine leukemia virus specific antigen.

Brief Summary Text (12):

In one embodiment, the present invention relates to hybridomas, resulting from the fusion of myeloma cells and spleen cells, which produce Friend murine leukemia virus specific monoclonal antibodies that form an immune complex with antigenic determinants of methanol-fixed F-MuLV infected cells.

Brief Summary Text (13):

In another embodiment, the present invention relates to Friend murine leukemia virus specific monoclonal antibodies specific for an antigenic determinant characteristic of

a methanol-fixed F-MuLV infected cell.

Detailed Description Text (2):

The present invention relates to Friend murine leukemia virus (F-MuLV) specific monoclonal antibodies, or binding fragments thereof, specific for an antigenic determinant of a gp85 envelope precursor protein characteristic of a methanol-fixed F-MuLV infected cell. Monoclonal antibodies 720, IgG1; 721, IgG2a; 722, IgG1; and 723, IgG3, are preferred.

Detailed Description Text (4):

The invention also relates to useful binding fragments of the Friend murine leukemia virus (F-MuLV) specific monoclonal antibodies. The antibody fragments are obtained by conventional techniques. For example, useful binding fragments can be prepared by digestion of the antibody using papain or pepsin.

CLAIMS:

1. A hybridoma which produces a Friend murine leukemia virus (F-MuLV) specific monoclonal antibody specific for an antigenic determinant of a gp85 envelope precursor protein characteristic of a methanol-fixed F-MuLV infected cell.
6. A monoclonal antibody specific for an antigenic determinant of a gp85 envelope precursor protein characteristic of a Friend Murine Leukemia virus infected cell, which antigenic determinant specifically binds the monoclonal antibody produced by the hybridoma according to claim 5, or a binding fragment thereof.
8. A Friend murine leukemia virus (F-MuLV) specific monoclonal antibody, or binding fragment thereof, specific for an antigenic determinant of a gp85 envelope precursor protein characteristic of a methanol-fixed F-MuLV infected cell.

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L2: Entry 105 of 142

File: USPT

Aug 25, 1998

DOCUMENT-IDENTIFIER: US 5798441 A

TITLE: Recombinant DNA vectors capable of expressing apoaeguorin

Other Reference Publication (22):

Chen, R., "Complete amino acid sequence and glycosylation sites of glycoprotein gp71A of Friend murine leukemia virus," Proc. Natl. Acad. Sci. USA, vol. 79, pp. 5788-5792, (Oct. 1982).

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L2: Entry 109 of 142

File: USPT

May 5, 1998

DOCUMENT-IDENTIFIER: US 5747323 A

TITLE: Retroviral vectors comprising a VL30-derived psi region

Brief Summary Text (50):

According to a second aspect of the present invention, it is provided a retroviral vector comprising (1) a 5' LTR and a 3' LTR derived from a retrovirus, (2) an isolated DNA fragment according to the invention and (3) a DNA fragment of interest, capable of being transcribed into RNA to produce an anti-sense RNA molecule or to further produce a protein of interest upon translation of said RNA. 5' and 3' LTRs may derive from various types of retroviruses. Examples of suitable retroviruses include avian retroviruses such as Avian Erythroblastose Virus (AEV), Avian Leukosis Virus (AVL), Avian Sarcoma Virus (ASV), Spleen Necrosis Virus (SNV) and Rous Sarcoma Virus (RSV), bovine retroviruses, feline retroviruses, murine retroviruses such as Murine Leukemia Virus (MuLV), Friend Murine Leukemia Virus and Murine Sarcoma Virus (MSV) and primate retroviruses. Others suitable retroviruses are well known in the art. A particularly preferred retrovirus is the MoMuLV virus. Thus, retroviral vectors of the invention are preferably engineered from MoMuLV-derived vectors, such as the N2 vector as well as derivatives of this vector.

(FILE 'HOME' ENTERED AT 17:24:21 ON 26 NOV 2003)

FILE 'MEDLINE, CANCERLIT, BIOTECHDS, EMBASE, BIOSIS, CAPLUS' ENTERED AT  
17:24:40 ON 26 NOV 2003

L1	5636 S FR-MULV OR FRIEND MURINE LEUKEMIA VIRUS
L2	2984 DUP REM L1 (2652 DUPLICATES REMOVED)
L3	196570 S PSI OR PACKAGING OR LTR
L4	28189 S PBS
L5	224420 S L4 OR L3
L6	74 S L5 AND L2
L7	140385 S GENE TRANSFE?
L8	139177 S GENE THERAPY
L9	23596 S DELIVERY AND VECTOR
L10	234090 S L9 OR L8 OR L7
L11	31 S L10 AND L6



L11 ANSWER 31 OF 31 CAPLUS COPYRIGHT 2003 ACS on STN  
 AN 1995:438147 CAPLUS  
 DN 122:207013  
 TI Retrovirus transfer and expression vectors for eukaryotic cells for use in  
**gene therapy based on Friend murine**  
**leukemia virus**  
 IN Cohen-Haguenauer, Odile; Heard, Jean Michel  
 PA Fr.  
 SO Fr. Demande, 46 pp.  
 CODEN: FRXXBL  
 DT Patent  
 LA French  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	FR 2707091	A1	19950106	FR 1993-8015	19930630
	FR 2707091	B1	19970404		
	WO 9501447	A1	19950112	WO 1994-FR806	19940630
	W: AU, BB, BG, BR, BY, CA, CN, CZ, FI, HU, JP, KP, KR, KZ, LK, LV, MG, MN, MW, NO, NZ, PL, RO, RU, SD, SK, UA, US, UZ, VN				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9471893	A1	19950124	AU 1994-71893	19940630
	AU 692163	B2	19980604		
	EP 659216	A1	19950628	EP 1994-921008	19940630
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	JP 08502901	T2	19960402	JP 1994-503325	19940630
	US 6312948	B1	20011106	US 1999-433322	19991103
	US 2002106790	A1	20020808	US 2001-970597	20011004
PRAI	FR 1993-8015	A	19930630		
	US 1994-270662	B1	19940630		
	WO 1994-FR806	W	19940630		
	US 1999-433322	A1	19991103		
AB	Retrovirus vectors that use the LTRs, <b>PBS</b> , and encapsidation signals of <b>Friend murine leukemia virus</b> are described for use in <b>gene therapy</b> . Stabilization of transcripts from the vector is improved by incorporating part or all of the gag gene. The construction of the vector FOCH29, its encapsidation and successful introduction into 3T3 cells are demonstrated.				

1994-11042 BIOTECHDS

TI An original retroviral vector derived from **Fr-MuLV**  
with high infection efficacy;  
Friend-Moloney leukemia virus retro virus vector construction and  
characterization, and potential application in **gene**  
**therapy** (conference abstract)

AU Cohen-Haguenauer O; Restrepo L M; Heard J M; Marty M; Boiron M  
CS Inst.Hematol.Paris; Inst.Pasteur-Paris  
LO Lab. Transfert Genetique et Oncologie Moleculaire, Institut  
d'Hematologie, Hopital Saint Louis, Paris, France.  
SO Cancer Gene Ther.; (1994) 1, 2, 141  
CODEN: 2815V

DT Journal  
LA English

AB Several retro virus vectors were designed based on Friend-Moloney  
leukemia virus (**Fr-MuLV**) FB29 and on cat sarcoma  
virus Sm. Initial evaluations were performed using the  
neomycin-resistance (Nr) reporter gene. Nr producer clones were derived  
following transfection into **Psi-CRIP** amphotropic  
**packaging** cell line. High producing clones were selected using a  
polymerase chain reaction followed by Southern blot analysis to determine  
transgene average copy number into infected mouse NIH3T3 fibroblasts  
target cells. Standard dilutions of the virus supernatant were used to  
perform titration assays to characterize the multiplicity of infection.  
A construct derived from **Fr-MuLV** devoid of splice  
acceptor sequences demonstrated the highest infection efficacy into  
NIH3T3 cells. Several clones were selected which showed one-copy vector  
transduction into target cells. The infection spectrum and potential of  
various constructs derived from this vector were being evaluated. A wide  
range of target cells of human origin were submitted to infection, with  
specific attention of hematopoietic stem cells. (0 ref)

L11 ANSWER 16 OF 31 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT/ISI on STN  
 AN 1995-01562 BIOTECHDS  
 TI A retro viral vector derived from **Fr-MuLV** with high  
 infection efficacy;  
 mouse Friend virus vector production for use in **gene**  
**therapy** (conference abstract)  
 AU Cohen-Haguenauer O; Restrepo L M; Dumey N; Masset M; Heard J M; Marty M  
 CS Inst.Hematol.Paris; St.Louis-Hosp.Paris; Inst.Pasteur-Paris  
 LO Gene Transfer and Molecular Oncology, Institute of Haematology, 75475  
 Paris Cedex 10, France.  
 SO Gene Ther.; (1994) 1, Suppl.2, S11  
 CODEN: 4352W  
 Second Meeting of the European Working Group on Human Gene Transfer and  
 Therapy, London, UK, 18-21 November, 1994.  
 DT Journal  
 LA English  
 AB Retro virus vectors based on strains selected for both tropism in animals  
 and high infectivity were developed. A mouse Friend-leukemia virus (**Fr-MuLV**)  
 FB29 vector was constructed, with or with a  
 splice acceptor (splice vector), using a Neo reporter gene and long  
 terminal repeat (**LTR**). High-producing clones were selected  
 after transfection of a **Psi-CRIP** amphotropic **packaging**  
 cell culture. An **Fr-MuLV** vector without splice  
 acceptor sequences showed highest infectivity on NIH3T3 cells. A  
 producer clone was selected with more than 1 copy vector transduction  
 into target cells and viral titers of over 10 million cfu/ml. Defective  
 retro virus integration sites were studied in Vero and human primary  
 fibroblast cells. The vector were evaluated on a wide range of human and  
 mouse cells, including glial and Schwann cell lines, human T-lymphocytes,  
 K562 and U937 cells. A 2nd self-inactivating construct was designed with  
 inactivation of the U3 enhancer in the 3'-end **LTR**, to increase  
 safety and provide an internal promoter. An epidermal growth factor gene  
 was cloned and the construct was evaluated in mouse and human epithelium  
 cells. (0 ref)